

AMENDMENTS TO THE CLAIMS

1.-111. (Canceled)

112. (Currently Amended) A semiconductor substrate processing apparatus, comprising:

a carry-in and carry-out section for carrying in and carrying out a semiconductor substrate having a surface on which a circuit is formed, in a dry state;

a plated metal film forming unit for forming a plated metal film on said semiconductor substrate which has been carried in, said plated film forming unit including

(i) a substrate holding portion for holding and rotating said semiconductor substrate, said substrate holding portion being movable between a first position and a second position,

(ii) an anode disposed above a surface, to be plated, of said substrate when said substrate is held by said substrate holding portion,

(iii) a cathode electrode arranged ~~for passing an electric current~~ in contact with said substrate when said substrate is held by said substrate holding portion at the first position,

(iv) a seal member positioned inwardly of said cathode electrode and in contact with said substrate when said substrate is held by said substrate holding portion at the first position,

(v) a plating liquid supply member configured to supply ~~for supplying~~ plating liquid onto said semiconductor substrate when held by said substrate holding portion, and

(vi) a pure water supply member configured to supply ~~for supplying~~ pure water ~~after formation of the plated film~~ onto the semiconductor substrate when held by said substrate holding portion,

~~wherein said substrate holding portion is movable, from a first position to a second position, away from said seal member and said cathode electrode such that pure water~~

~~supplied when said substrate holding portion is in the first position is retained on said semiconductor substrate by said seal member, and pure water supplied when said substrate holding portion is in the second position underflows said seal member and contacts said cathode electrode for cleaning said cathode electrode~~ said pure water supply member is positioned and operable to supply the pure water onto the substrate when held and rotated by said substrate holding portion at the second position so as to clean said cathode electrode and said seal member with the pure water scattered from the substrate;

a bevel etching unit for etching and removing at least one of the plated metal film, a seed layer and a barrier layer formed at the peripheral edge portion of the semiconductor substrate, said bevel etching unit including

(i) a substrate holding portion for holding and rotating said semiconductor substrate,

(ii) a center nozzle configured to supply an acid solution to a center portion of the semiconductor substrate, and

(iii) an edge nozzle configured to supply an oxidizing agent solution to a peripheral edge portion of the semiconductor substrate,

wherein said bevel etching unit is operable to rotate the semiconductor substrate and to supply the acid solution to said center nozzle and the oxidizing agent solution to said edge nozzle simultaneously so as to mix the acid solution and the oxidizing agent solution with each other on the peripheral edge portion of the semiconductor substrate in rotation; and

~~— a bevel etching unit operable to supply an acid solution to a center portion of said semiconductor substrate being rotated and to simultaneously supply an oxidizing agent solution to a peripheral edge portion of said semiconductor substrate so as to mix the acid solution and the oxidizing agent solution with each other on the peripheral edge portion of said semiconductor substrate for etching and removing at least one of said plated metal film, a seed layer and a~~

~~barrier layer formed at the peripheral edge portion of said semiconductor substrate, and operable to rotate said semiconductor substrate so as to spin-dry said semiconductor substrate which has been etched; and~~

a transport mechanism for transporting said semiconductor substrate between said units, said transport mechanism having a dry hand for handling said semiconductor substrate in a dry state and a wet hand for handling said semiconductor substrate in a wet state.

113. (Currently Amended) A plated metal film forming unit for forming a plated metal film on a semiconductor substrate, comprising:

a substrate holding portion for holding and rotating the semiconductor substrate, said substrate holding portion being movable between a first position and a second position;

an anode disposed above a surface, to be plated, of the substrate when the substrate is held by said substrate holding portion;

a cathode electrode arranged for passing an electric current in contact with the substrate when the substrate is held by said substrate holding portion at the first position;

a seal member positioned inwardly of said cathode electrode and in contact with the substrate when the substrate is held by said substrate holding portion at the first position;

a plating liquid supply member configured to supply ~~for supplying~~ plating liquid onto the substrate when held by said substrate holding portion at the first position; and

a pure water supply member configured to supply ~~for supplying~~ pure water ~~after formation of the plated film~~ onto the substrate when held by said substrate holding portion,

~~wherein said substrate holding portion is movable, from a first position to a second position, away from said seal member and said cathode electrode such that pure water supplied when said substrate holding portion is in the first position is retained on the substrate by said seal member, and pure water supplied when said substrate holding portion is in the second position~~

~~underflows said seal member and contacts said cathode electrode for cleaning said cathode~~
~~electrode~~ said pure water supply member is operable to supply the pure water onto the substrate
when held and rotated by said substrate holding portion at the second position so as to clean said
cathode electrode and said seal member with the pure water scattered from the substrate.

114.-117. (Canceled)